

Remarks/Arguments:

Claims 1-2, 4-6, 9-10 and 12-23 are pending in the above-identified application. Claim 3, 7-8 and 11 have been cancelled. New claims 22 and 23 have been added.

Claims 1-7, 9, 13 and 18-21 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Weizorek et al. and Motomura et al. The rejection of claims 3 and 7 are moot due to the cancellation of these claims. Claim 1 is amended to recite,

... the circuit board is out of direct **physical** contact
with the case ...

Basis for these amendments may be found in the specification, for example, at page 9, lines 6-19 and Figs. 3-5.

The exemplary embodiment of Applicant's invention includes a circuit board 20 and a case 15 (housing part). (Figs. 3 and 4). Heat radiator 23 is fixed to lower case 15 (a). The circuit board 20 is coupled to the heat radiator 23. The circuit board 20 is not fixed to lower case 15(a). That is, the outer peripheral surfaces 20(a)-20(d) of the circuit board 20 are kept in a free state in lower case 15(a). (Page 9, lines 6-19). Thus, the circuit board 20 is kept "...out of **direct physical contact**" with lower case 15(a). Applicants' claimed feature of "...the circuit board is out of **direct physical contact** with the case" is advantageous over the prior art because stress is not applied on soldering portions of the circuit components mounted on circuit board 20 if loads of thermal expansion and contraction vibration are applied. Thus, reliability can be expected to be improved.

The Examiner admits that Wiezorek et al. does not disclose that "the circuit board is out of direct contact with the case." (Office Action, page 5, lines 4-5). The Examiner argues, however, that Motomura et al. does disclose "...the circuit board is out of direct contact with the case." In particular, the Examiner argues that the capacitor unit 342 is disconnected from the printed circuit board 341. (Office Action, page 5, lines 6-11). The capacitor unit 342 in Motomura, however, is in "**direct physical contact**" with the printed circuit board 341.

Motomura et al. includes a capacitor unit 342 that houses a capacitor 348 and a printed circuit board 341. (Figs. 21, 22A and 22B). The printed circuit board 341 has a projected portion 341a, on which the flasher/capacitor unit 342 is mounted slidably via a leg portion 342a. (Col. 19, lines 57-59). A top of the projected portion 341a has semi-circular recesses 361 and 362, which are engaged clickedly with a projection 360 formed under the flasher/capacitor unit 342. (Col. 19, line 66 to col. 20, line 2). When flasher/capacitor unit 342 slides from one position to another, as shown in Figs. 22A and 22B, "...the projection 360 is clicked with the recess 361, the flasher/capacitor unit 342 is contained in the contour of the film housing 302 in compact fashion, and disconnected electrically from the printed circuit board 341. That is, Motomura et al. discloses that capacitor unit 342 may only become "disconnected electrically" from the printed circuit board 341. The bottom surface of capacitor unit 342 remains, however, in "direct physical contact" with the top surface of the projected portion 341a.

Claim 1 is also amended to include the features of claim 3, namely,

...the heat radiator has a fixing hole, the case has a fixing boss corresponding to the hole formed on the heat radiator, and the hole and the boss are screwed to be fixed in the case...

Wiezorek discloses that housing parts 1 and 2 are connected by a screw or rivet device. (Col. 4, lines 49-51). The Examiner argues that the rivet device or screws would inherently have holes and bosses. (Office Action, page 6, item 6).

"In order for a disclosure to be inherent, 'the missing descriptive matter must necessarily be present in the [original] application's specification such that one skilled in the art would recognize such disclosure.' *TurboCare Division v. General Electric Co.* 60 USPQ2d 1017, 1023 (Fed. Cir. 2001), quoting *Tronzo v. Biomet, Inc.* 47 USPQ2d 1829, 1834 (Fed. Cir. 1998)

When the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. **Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference** and that it would be so recognized by persons of ordinary skill in the art. *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 20 USPQ 2d 1746, 1749 (Fed. Cir. 1991). Applicants respectfully traverse the Examiner's inherency argument upon which this

rejection was based. There is no evidence in the record that the "...the heat radiator has a fixing hole, the case has a fixing boss corresponding to the hole formed on the heat radiator, and the hole and the boss are screwed to be fixed in the case..."

Claim 1 is also amended to include the features of claim 7, namely,

... wherein the circuit component is pressure welded to the heat radiator by using an elasticity of a leaf spring attached to the heat radiator...

The Examiner argues that claim 7 is unpatentable because the "...the product in the product-by-process claim is the same as or obvious from a product of the prior art..." The Examiner has not, however, provided any citation to "a product" in the prior art references which "is the same as or obvious" to any corresponding product defined by original claim 7, i.e. "...the circuit component is pressure welded to the heat radiator by using an elasticity of a leaf spring..." Applicants respectfully traverse the Examiner's argument that the features of claim 7 are unpatentable. Accordingly, claim 1 is also allowable for the features included from original claim 7.

Claim 1 is also amended to include the features of claim 8, namely,

... wherein the leaf spring is processed in a rectangular U shape, in which one end has a surface that is brought into contact with a rear surface of the heat radiator and another end has a pressure welding portion that allows the circuit component to be pressure welded to the heat radiator, and a center portion thereof is fixed to the heat radiator with a screw.

The Examiner argues that the features of claim 8 are unpatentable in view of Wiezorek, Motomura and Selgin. Neither of these references, however, disclose a leaf spring "...brought into contact with a rear surface of the heat radiator and another end has a pressure welding portion that allows the circuit component to be pressure welded to the heat radiator, and a center portion thereof is fixed to the heat radiator with a screw..." Accordingly, claim 1 is also allowable for the features included from original claim 8.

Thus, claim 1 is allowable over the art of record. Claims 2, 4-6, 9, 13 and 18-21 depend from claim 1. Accordingly, claims 2, 4-6, 9, 13 and 18-21 are allowable over the art of record.

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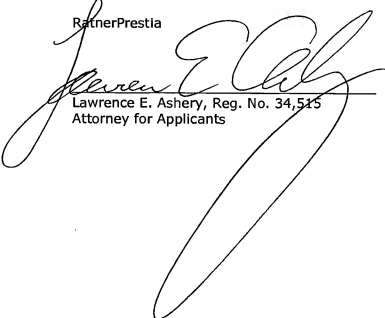
Claims 8-10, 12 and 14-17 were rejected under 35 U.S.C. § 103 (a) as being unpatentable in view of a combination of references to Weizorek et al., Motomura et al., Selgin and Nakajima et al. The rejection of claim 8 is moot due to the cancellation of this claim. Claims 9-10, 12 and 14-17 are, however, allowable by virtue of their dependency on an allowable independent claim.

New claims 22 and 23 have been added. Basis for these claims may be found in the specification, for example, at page 9, line 27 to page 10, line 5 and Figs. 7 and 8. No new matter has been added.

In view of the foregoing amendments and remarks, this Application is in condition for allowance which action is respectfully requested.

Respectfully submitted,

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